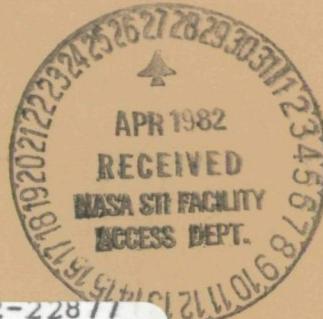




**Aerospace Medicine  
and Biology  
1981 Cumulative  
Index**

NASA SP-7011(228)  
January 1982

## National Aeronautics and Space Administration



(NASA-SP-7011(228)) AEROSPACE MEDICINE AND  
BIOLOGY: A CUMULATIVE INDEX TO THE 1981  
ISSUES (National Aeronautics and Space  
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# Aerospace Medicine & Biology

## **SPECIAL NOTICE**

The abstract sections of the supplements of *Aerospace Medicine and Biology* can be bound separately. Individual abstracts can be located readily by means of the page numbers given at each entry, e.g., p0172 N81-27793. To assist the user in binding Supplements SP-7011(216) through SP-7011(227), a title page is included in the back of this Cumulative Index.

**NASA SP-7011 (228)**

**A CUMULATIVE INDEX  
TO  
A CONTINUING BIBLIOGRAPHY ON**

**AEROSPACE MEDICINE  
AND BIOLOGY**

**This Cumulative Index supersedes the indexes  
contained in supplements [SP-7011(216) through  
SP-7011(227)] published by NASA during 1981.**



Scientific and Technical Information Branch

1982

**National Aeronautics and Space Administration**

Washington, DC

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# INTRODUCTION

## WHAT THIS CUMULATIVE INDEX IS

This publication is a cumulative index to the abstracts contained in NASA SP-7011(216) through NASA SP-7011(227) of *Aerospace Medicine and Biology: A Continuing Bibliography*, NASA SP-7011, by means of supplements, serves as a current abstracting and announcement journal for references on bioscience and biotechnology. It has been compiled through the cooperative efforts of the American Institute of Aeronautics and Astronautics (AIAA), and the National Aeronautics and Space Administration (NASA). Entries prepared by the two contributing organizations are identified as follows:

1. NASA entries by their STAR accession numbers (N81-10000 series)
2. AIAA entries by their IAA accession numbers (A81-10000 series)

## HOW THIS CUMULATIVE INDEX IS ORGANIZED

This Cumulative Index includes a subject index, a personal author index, and a corporate source index.

## HOW TO USE THE SUBJECT INDEX

Two types of cross-references appear in the subject index:

1. Use (U) references indicate that the subject term is not "postable," i.e., not a valid term, and that the following term or terms are used instead. For example:

DOSE  
    U DOSAGE  
AIRLINERS  
    U COMMERCIAL AIRCRAFT  
    U PASSENGER AIRCRAFT

2. Narrower Term (NT) references refer the user to more specific headings in the same subject area, under which additional material on the subject may be found. For example:

FATIGUE (BIOLOGY)  
    NT AUDITORY FATIGUE  
    NT FLIGHT FATIGUE  
    NT MUSCULAR FATIGUE

In addition, a searcher may use the title or title and title extension in the index to narrow further his quest for particular items, this is because subject terms can readily include more than one class of document. For example:

BIOLOGICAL EFFECT  
    Vibratory force effect upon  
    biological systems, particularly  
    human organism.  
    Biological effect of cosmic and  
    solar radiations on human  
    body at high altitudes.

illustrates a case where two references on different topics are listed under the same subject term.

## **HOW TO USE THE PERSONAL AUTHOR INDEX**

All personal authors used in the abstract-section citations in the individual Supplements appear in the index. Differences in translation schemes may require multiple searching of the index for variants of an author's name. For example:

EMELIANOV, M. D.

and

YEMELYANOV, M. D.

## **HOW TO USE THE CORPORATE SOURCE INDEX**

The corporate source index entries are abridged versions of the corporate sources used in the abstract-section citations in the individual Supplements. The corporate source supplementary (organizational component) does not appear in the index. For example:

NEW MEXICO STATE UNIV., LAS CRUCES. DEPT. OF BIOLOGY. (Source citation entry)  
NEW MEXICO STATE UNIV., LAS CRUCES. (Source index entry)

## **IDENTIFICATION OF DESIRED SUPPLEMENT**

The abstract and descriptive cataloging for any accession number selected from the indexes may be found in the appropriate Supplement. The page-number range of each Supplement appears on the inside front cover of this index. Once the range of page numbers containing the selected accession number is located in the second column, the desired Supplement number will be found in the first column. For example:

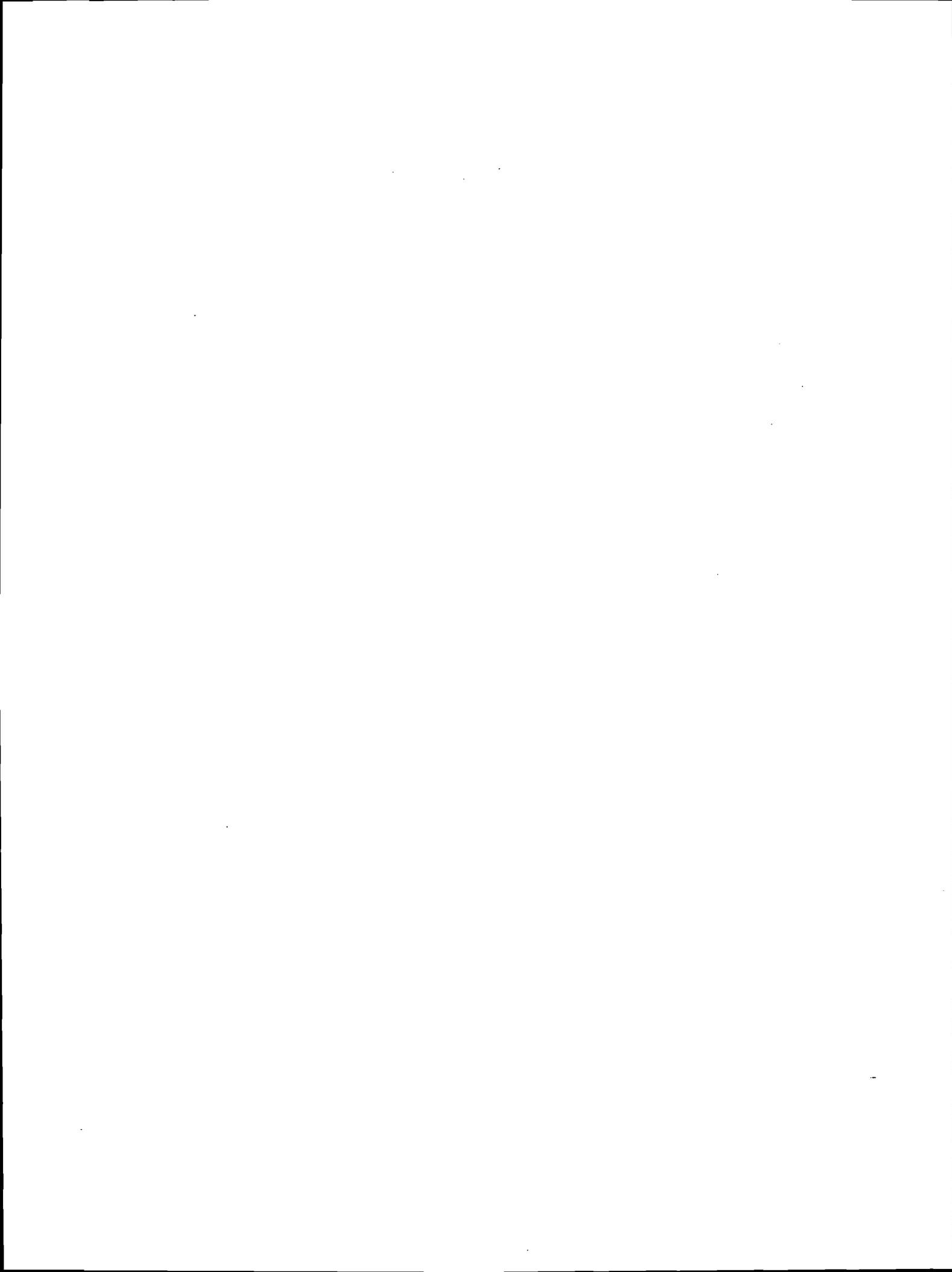
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## **AVAILABILITY OF DOCUMENTS**

Information concerning the availability of documents announced in *Aerospace Medicine and Biology* supplements is found in the Introduction to the most currently issued supplement.

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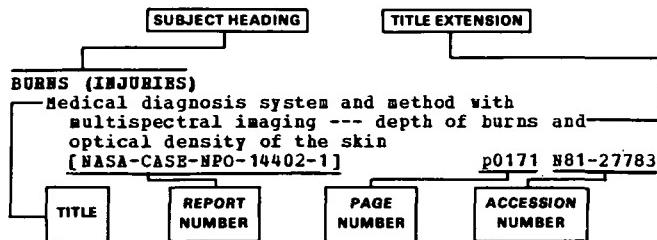
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AEROSPACE MEDICINE AND BIOLOGY / *a continuing bibliography*

JANUARY 1982

1981 Cumulative Index

## Typical Subject Index Listing



The title is used to provide a description of the subject matter. When the title is insufficiently descriptive of the document content, a title extension is added, separated from the title by three hyphens. The NASA or AIAA accession number is included in each entry to assist the user in locating the abstract in the abstract section of this supplement. If applicable, a report number is also included as an aid in identifying the document.

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 USSR Report: Space Biology and Aerospace Medicine, vol. 14, no. 6  
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 USSR Report: Space Biology and Aerospace Medicine, volume 15, no. 2, March - April 1981  
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- Soviet literature in aviation, space and high-altitude biology and medicine.  
 /Bibliography. Number 3/ --- Russian book  
 p0131 A81-33772
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- USSR Report: Space biology and aerospace medicine vol. 15, no. 3, May - June 1981  
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 p0070 A81-22107
- Sanitary, hygienic and physiological aspects of manned spacecraft --- Russian book  
 p0084 A81-24543
- Soviet literature in aviation, space and high-altitude biology and medicine.  
 /Bibliography. Number 3/ --- Russian book  
 p0131 A81-33772
- Cosmos 1129 - Spaceflight and bone changes  
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- Life sciences and space research XIX; Proceedings of the Topical Meeting, Budapest, Hungary, June 2-14, 1980  
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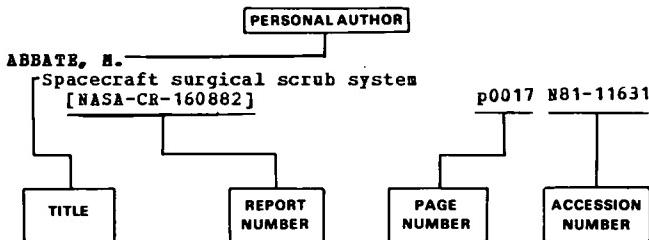
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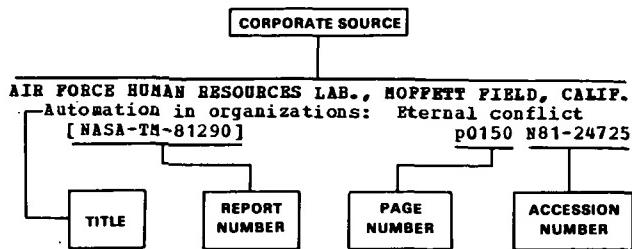
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- CANADA INST. FOR SCIENTIFIC AND TECHNICAL INFORMATION, OTTAWA (ONTARIO).  
Enzymatic determination of oxygen in aqueous solutions. 1: Photosynthesis rate in cultivar of *Cichorium endivia* l  
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- CANYON RESEARCH GROUP, INC., WESTLAKE VILLAGE, CALIF.  
Selected research publications in cognitive visual technology research simulator studies:  
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Physiological mechanisms of spatial disorientation not of visual origin  
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Molecular biology of environmental aromatic hydrocarbons  
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- CHINESE MEDICAL ASSOCIATION, BEIJING.  
Chinese Medical Journal. Volume 94, number 4, April 1981  
[PB81-204752] p0231 N81-32861
- CINCINNATI UNIV., OHIO.  
On parachutist dynamics  
[AD-A090335] p0033 N81-12741
- CIVIL AEROMEDICAL INST., OKLAHOMA CITY, OKLA.  
Effects of ozone (0.30 parts per million, approximately 600  $\mu\text{g}/\text{m}^3$ ) on sedentary men representative of airline passengers and cockpit crewmembers  
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Microwave effects of learning and memory in mice  
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[AD-A102677] p0232 N81-32863
- CONFERENCE OF RADIATION CONTROL PROGRAM DIRECTORS, INC., ROCKVILLE, MD.  
Criteria for adequate radiation control programs (X Ray): A report of task force 2A  
[PB81-197881] p0231 N81-32860
- CONNECTICUT UNIV., FARMINGTON.  
Toxicology and metabolism of nickel compounds  
[DOE/EV-03140/5] p0036 N81-13629
- Toxicology and metabolism of nickel compounds  
[DE81-028924] p0230 N81-32850
- CONNECTICUT UNIV., STORRS.  
Toxicology and metabolism of nickel compounds: Comprehensive report of overall activities during the three-year period from 1 December

1977 - 30 November 1980  
 [DOE/EV-03140/5-T1] p0078 N81-17697  
 Modeling the effects of sustained accelerations  
 on pilot tracking performance p0212 N81-31839  
**CONSIGLIO NAZIONALE DELLE RICERCHE, PISA (ITALY).**  
 CAMIRD 3: Computer Assisted Medical Internal  
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 [DOE/EV-10303/5] p0032 N81-12731  
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 [AD-A102255] p0213 N81-31844  
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 XDC-2 digital decompression computer:  
 Assessment of decompression profiles by  
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 Airscan: An ultrasensitive trace air impurity  
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**DEFENCE RESEARCH ESTABLISHMENT, OTTAWA (ONTARIO).**  
 Techniques for calibrating miniature  
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 bioeffects studies at 2450 MHz: Evaluation  
 and calibration of BRH - NARDA probes  
 [AD-A097764] p0149 N81-24722  
 Calculations of heat and vapour transport in  
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 Response of bacillus subtilis spores to heavy  
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 Health Effects of Diesel Engine Emissions:  
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Health Effects of Diesel Engine Emissions:  
 Proceedings of an international symposium  
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- NATIONAL PHYSICAL LAB., TEDDINGTON (ENGLAND).  
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- Anthropometry: Basic studies and applications. Citations from the NTIS data base  
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Altitude acclimatization. Citations from the International Aerospace Abstracts data base  
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- Enhancing sensitivity to visual motion  
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- NUCLEAR REGULATORY COMMISSION, WASHINGTON, D. C.  
Radiation protection: An analysis of thyroid blocking

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